Adaptation in Plant Breeding

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TOLERANCE OF MAIZE INBRED LINES TO PINK STEM BORER

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The most important maize pest (*Zea mays* L.) in North America and Europe is the European corn borer (*Ostrinia nubilalis* Hbn). However, in Southern Europe the pink stem borer (*Sesamia nonagrioides* Lef.), also causes significant damage to maize. Nowadays, there is no method for controlling this pest. One of the most promising alternatives is to grow insect resistant cultivars. The basic challenge in insect-resistance breeding programs is to identify resistant germplasm sources. Consequently, the objective of this work was to study the resistance/tolerance of eighty-two inbred lines of maize. The inbreds were evaluated under artificial infestation with *Sesamia nonagrioides* in 1993 and 1994. Each experiment was arranged in randomized complete blocks with two replications. Data were recorded on days to silking, stem lodging, and proportion of damaged stem. The inbreds F473, A509, EP55, EP17 and PB130 had the least damage from *Sesamia*. They come from diverse origins. Inbreds from Reid germplasm, like A664, A652, CM151 and W64A, also showed good tolerance to corn borer attack. W64A had already shown the best tolerance to pink stem borer in a previous study (Cartea et al. 1994). However, lines like A662 that were considered good germplasm for resistance to The European corn borer (Hudon and Chiang, 1985) were susceptible to *Sesamia nonagrioides*.